

REMARKS

This application was filed with 42 claims. In a previously filed response to a now final restriction requirement, Applicant elected Claims 37 – 40 and added Claims 43 – 47 by amendment. Claims 1 – 36, 41 and 42 were withdrawn from consideration, pending the allowance of the elected claims. No claims have been canceled or amended. Claims 1 – 47 are pending in the Application. Reconsideration of the application based on the elected claims and arguments submitted below is respectfully requested.

The Examiner cited the following as Prior Art in rejecting those claims: Dreyer et al, U.S. Patent Number 6,660,170; Roy, U.S. Patent Number 3,839,202 and the Terra Tube Publication cited in Applicant's Supplemental Information Disclosure Statement filed May 25, 2005. The Examiner did not rely on but cited as Prior Art the references listed in the Information Disclosure Citation cited the Applicant's Information Disclosure Statement filed May 18, 2004 and attached to the Office Action mailed January 30, 2006. Applicant has reviewed these references and has concluded that they do not teach the present invention.

Amendments to the Specification

The Examiner has identified various typographical errors and similar informalities in the Specification. Although clarifying language may have been included, no new material has been added. The proposed replacement paragraphs do not touch the merits and are submitted to address only the informalities identified by the Examiner.

Claim Rejections - 35 U.S.C. § 103

Claims 37 – 40 and Claims 43 – 47 have been rejected under 35 U.S.C. § 103 based on Dreyer et al, U.S. Patent Number 6,660,170 in view of Roy, U.S. Patent Number 3,839,202 and in view of and the Terra Tube Publication.

I. The Terra Tube Publication is not a Prior Art Reference

When printed publications are used as references, MPEP § 901.06 requires that the date to be cited is the date of publication. The end page of the Terra Tube Publication indicates that it was published in “3/05” (i.e. March 2005) and the publication displays a 2005 copyright. Thus, the publication date of this reference is after the February 18, 2004 filing date of this Application and this reference can not be considered prior art. Applicant has made no admission that the reference was prior art. Further, Applicant specifically stated in the Supplemental Information Disclosure Statement that there is no indication that the reference predates the filing date of the Application. Applicant’s mere listing of this reference in the Supplemental Information Disclosure Statement filed May 25, 2005 can not be taken as an admission that the reference is prior art against the claims of this Application. MPEP § 2131 II citing *Riverwood Int’l Corp. v R.A. Jones & Co.*, 324 F.3d 1345, 1354-55, 66 USPQ2d 1331, 1337-38 (Fed. Cir 2003).

Applicant respectfully submits that, since the Terra Tube Publication reference is not prior art and is therefore not properly combinable with Dreyer, the Office Action has failed to establish any *prima facie* conclusion of obviousness based on the Terra Tube Publication reference.

II. Claim Rejections - 35 U.S.C. § 103 Based On Dreyer and Roy

The Examiner asserts that Dreyer teaches all the limitations of Claims 37 – 40 and Claims 43 – 47 with the exception of the step of disposing “a flocculant material ...in the cavity between the filtering surfaces,” which the Examiner further asserts is taught by Roy. The Examiner also asserts that “it is known in the art to utilize a flocculant held or encapsulated in a fibrous or mesh material, to aid in filtering water” and that it would have been obvious to dispose the flocculant of Roy in the cavity of Dreyer. Applicant respectfully asserts that the Office Action mischaracterizes the limitations taught in Dreyer and Roy.

Applicant respectfully asserts that the combination of Dreyer and Roy fails to teach all the limitations of the present invention as recited in independent Claims 37 and 41, as previously presented. Applicant respectfully further asserts that the combination of the cited prior art is improper and that the Office Action fails to factually support a *prima facie* conclusion of obviousness as required in MPEP § 2142.

Dreyer, US Patent Number 6,660,170

Dreyer teaches a method of filtering water entering a water intake system, including the steps of (i) installing a containment/exclusion boom in a body of water, the boom including a exclusion (filtration) curtain suspended from a floatation/mooring support system positioned in a body of water and (ii) drawing water through the filtration curtain by means of a water intake system positioned within the perimeter of the boom. The Dreyer boom curtain includes sheets of a flexible fabric. (Dreyer col. 3 lns. 3 – 21, col. 3 lns. 20 – 25) The boom curtain is

suspended from flotation elements of the support system which are provided freedom of movement in at least the vertical direction. (Dreyer Figs. 1 -5)

The flexible fabrics of the boom curtain include permeable geosynthetic fabrics having openings in sizes that are useful for the purposes of the Dryer invention. (Dreyer col. 4 lns. 6 – 9) The purpose of the Dreyer invention is to filter entrained debris, aquatic life and sediment from water drawn by pumping action into a water intake system. (Dreyer col. 1 lns. 18 – 48, col. 2 lns. 3 – 40) Dreyer is silent as regards filtration colloidal sediments and flocs. Thus, there is no teaching that the geosynthetic fabrics having openings in sizes that are useful for the purposes of filtering colloidal sediments or flocs.

A notable feature of the Dreyer invention is the gas injection system that is used to release compressed air in the cavities between the multi-layered sheets of the boom curtain. Air is transported via an air conduit (element 48', 148' and 248') to a gas outlet (elements 50, 150 and 250) in Figures 2, 4 and 5 of Dreyer. When air is released into the cavities, it displaces the water in the cavities and bubbles air through the filter panels to remove sediments and aquatic organisms. (Dreyer col. 4 ln. 53 – col. 4 ln. 6)

Roy, US Patent Number 3,839,202

Roy does not teach filtering of water as the Office Action claims. Instead, Roy teaches dissolving a flocculant held in a meshwork container and dispersing the dissolved flocculant into a basin or conduit of water to form flocs outside the meshwork container.

Specifically, Roy teaches a flocculant material encased in a meshwork or fibrous container such as a polyethylene mesh container. The container is suspended in a container or conduit of water such as a tank, pipeline, river, stream, duct and the like. (Roy col. 4 lns 5 – 18, Figs. 1 and 2) Roy teaches that, upon emersion into the water, the flocculant of Roy will swell through the openings of the mesh container and will disperse from the surface of the mesh container into the water held in the tank or conduit into which the mesh container is immersed. The flocculant is renewed by refilling the mesh container. (Roy col. 7 ln. 25 – col. 8 ln. 17)

A. Procedural Shortcomings of the Rejections:

(1) **The prior art references teaches away from the invention.**

[A] prior art reference actually teaches away from the invention if the Examiner's interpretation of the prior art would render the prior art inoperable. In re Gordon, 221 U.S.P.Q. 1125, 1127.

Bearing this legal principle in mind, further analysis of Dreyer and Roy provide a first reason why Dreyer and Roy do not suggest their combination. Placement of the flocculant material of Roy in the cavities in the filter panels of Dreyer would render the Dreyer invention inoperable in that the flocculant would swell to fill the cavities according to the teachings of Roy. This would prevent a necessary function of Dreyer, the flow of water through the filter panels and into the water intake. Further, placing the flocculants of Roy in the cavity of Dreyer would prevent the gas injection

system of Dreyer from filling the cavities with air and bubbling air through the filter panels to dislodge filtered entrained sediment and aquatic life.

Additionally, placement of the flocculant material of Roy in the cavities in the filter panels of Dreyer would render the Roy invention inoperable in that the Roy flocculant would swell to fill the cavities according to the teachings of Roy. Roy provides a mesh material which allows the flocculant to swell through the openings thereof. However, the mesh material of Roy appears to have larger openings than the openings of the Dreyer filter panels, which are sized for the filtration of sediment. (see Roy Fig. 1 showing broad meshwork). There is no teaching that the Roy flocculant would similarly swell through the openings of the Dreyer filter panels and it is likely that the smaller openings of the Dreyer filter panels would inhibit, if not prevent, the Roy flocculant material being dissolved into the water from the surface of the Dreyer filter panels.

Applicant asserts that combination of Dreyer and Roy, as suggested in the Office Action, would render both the Dreyer invention and the Roy invention inoperable. Thus, the prior art references actually teach away from the invention and the Dreyer and Roy references are not properly combinable under § 103.

(2) There is no basis in the art for combining the references.

To rely on references under § 103, there must be a basis in the art for combining or modifying references. MPEP § 2143.01 states that, “the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination,” citing

In re Mills, 916 F.2d 608, 16 USPQ2d 1430 (Fed. Cir. 1990). The Federal Circuit stated in *In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998) that to “prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the [Office Action] to show a motivation to combine the references that create the case of obviousness.” The court further noted that there were three possible sources for such motivations, namely “(1) the nature of the problem to be solved; (2) the teachings of the prior art; and (3) the knowledge of persons of ordinary skill in the art.” Further, the Office Action, whether relying “on an express or an implicit showing [of motivation], must provide particular findings related thereto. Broad conclusory statements standing alone are not evidence.” *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000) Moreover, “[t]he level of skill in the art cannot be relied upon to provide the suggestion to combine references.” MPEP § 2143.01 (citing *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999)).

Bearing these legal principles in mind, analysis of the Office Action provides a second reason why the prior art of Dryer and Roy are not properly combinable. The Office Action fails to cite any explicit teaching in the prior art to suggest combining the exclusion boom of Dreyer with the flocculant materials of Roy. Applicant notes that the Office Action cites only the level of skill in the art upon to provide the suggestion to combine Dreyer and Roy.

In the present application, the Applicant stated that the general problem of removing colloids from storm runoff and waste water has been solved by pooling the

water into basins and conduits and seeding the water with flocculants. Roy addresses a method of seeding flocculants in water contained in basin or conduit, but only after pooling the water. Dreyer is inapplicable to the problem solved by the present invention. The Office Action makes no showing of why it would have been obvious to eschew the method of pooling and seeding storm runoff and waste water for the method of the present invention. The Applicant further submits that the only suggestion of combining the method of intercepting a surface water runoff with a filtration barrier and the method of treating turbid water with flocculants and filtering the flocs within the filtration barrier is found in the Applicant's own specification. (see, Application paragraphs 12 – 14)

Applicant asserts that the Office Action has failed to provide the required particular findings relating to motivation, suggestion or teaching to combine the cited references and has only provided broad conclusory statements as to obviousness. Since there is no proper evidence of a suggestion or motivation to combine the cited references, the Dreyer and Roy references are not properly combinable under § 103.

Based on the arguments above, Applicant respectfully submits that, since the cited references are not properly combinable, the Office Action has failed to establish any *prima facie* conclusion of obviousness. Applicant respectfully requests that the rejection of Claims 37 – 40 and Claims 43 – 47 under § 103 be withdrawn. Applicant respectfully further submits that Claims 37 – 40 and Claims 43 – 47 are in condition for allowance.

B. Substantive Shortcomings of the Rejection

(1) **Combined prior art fails to teach or suggest all claim limitations.**

As previously stated, the Office Action has rejected Claims 37 – 40 and Claims 43 – 47 based on Dreyer in view of Roy. MPEP § 2142 states that “[t]o establish a prima facie case of obviousness ...the prior art reference[s] must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art,” citing *In re Vaeck*, 947, F.2d 488, 20 USPQ 1438 (Fed. Cir. 1991).

Claims 37 – 40 and Claims 43 – 47 are non-obvious over the cited prior art.

The Examiner asserts that Dreyer teaches all the limitations of Claims 37 – 40 and Claims 43 – 47 with the exception of the step of disposing “a flocculant material ...in the cavity between the filtering surfaces,” which the Examiner further asserts is taught by Roy.

Claim 37 is non-obvious over Dreyer in view of Roy

As regards Claim 37, the claim recites the steps of “(d) flowing the treatment stream through the flocculant material so as to coagulate a portion of the colloidal silt and form flocs; and (e) flowing the treatment stream through the floc filtering surface so as to remove at least a portion of the flocs and to form an effluent stream.” Neither Dreyer nor Roy teach the steps of coagulating colloidal silt within the cavity of a filtration barrier and filtering the resulting floc so as to retain it in the cavity of the filtration barrier. As shown above, Roy teaches dissolving the flocculant in water and suggests forming a floc outside the meshwork container of

Roy. Dreyer does not teach the use of flocculants or the filtration of flocs. As shown above, Dreyer does teach releasing air into the cavities of a filtration panel to remove sediments from the filtration panel and, presumably, the cavities therein. These teachings are contrary to cited this limitation of claim 37.

Claim 37 also recites the limitation of “the second geo-fabric sheet having an floc filtering surface.” Neither Dreyer nor Roy teach a geo-fabric sheet having a filtration surface capable of filtering floc. Dreyer teaches only a geo-fabric sheet with openings of a range “useful for the purposes of the [Dreyer] invention” and, as discussed above, does not suggest a floc filtering surface. (Dreyer col. 4 lns. 6 – 9)

Claim 37 also recites the limitation of “a support frame wherein at least one of the first and second geo-fabric sheets is affixed to the support frame so as to form a filtration barrier.” Neither Roy nor Dreyer teach this limitation. Roy does not teach a either geo-fabric sheets or a filtration panel. In Dreyer, the geo-fabric sheets of the filtration panel are suspended from a flotation device freely movable in at least the vertical direction. This is not equivalent to the support frame claimed and taught by the present invention.

Thus, Dreyer combined with Roy fails to teach at least one of the limitations of Claim 37.

Claim 43 is non-obvious over Dreyer in view of Roy

As regards Claim 43, the claim recites the steps of “(d) flowing at least a portion of the water flow through the flocculant material so as to coagulate a portion of the colloidal silt and form flocs; and (e) filtering the flocs by means of the at least one

geo-fabric sheet.” As shown above, neither Dreyer nor Roy teach the steps of coagulating colloidal silt within the cavity of a filtration barrier and filtering the resulting floc so as to retain it in the cavity of the filtration barrier. As shown above, Roy teaches dissolving the flocculant in water and suggests forming a floc outside the meshwork flocculant container. Dreyer does not teach the use of flocculants or the filtration of flocs. As shown above, Dreyer does teach releasing air into the cavities of a filtration panel to remove sediments from the filtration panel and, presumably, the cavities therein. These teachings are contrary to cited this limitation of claim 43.

Thus, Dreyer combined with Roy fails to teach at least one of the limitations of Claim 43. Since Dreyer and Roy fail to disclose all of the limitations set forth in Claims 37 and 43, the cited reference fails to factually support a *prima facie* conclusion of obviousness as regards Claims 37 and 43. Applicant respectfully submits that the rejections of Claims 37 and 43 under 35 U.S.C. § 103(a) are no longer supported by the cited art and should be withdrawn.

Claims 38 and 39 each depend from independent Claim 37 and Claims 44 – 47 each depend, directly or indirectly, from independent Claim 43. Since Claims 38, 39 and 44 – 47 each depend from either independent Claims 37 or 43, which for the reasons stated above are allowable, Applicant respectfully submits that the rejection of Claims 38, 39 and 44 – 47 under 35 U.S.C. § 103 should be withdrawn.

Applicant respectfully further submits that Claims 37 – 40 and Claims 43 – 47 are in condition for allowance.

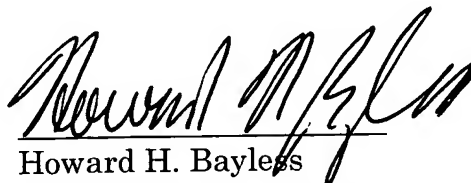
Applicant has commented on some of the distinctions between the cited references and the claims to facilitate a better understanding of the present invention. This discussion is not exhaustive of the facets of the invention, and Applicant hereby reserves the right to present additional distinctions as appropriate. Furthermore, while these remarks may employ shortened, more specific, or variant descriptions of some of the claim language, Applicant respectfully notes that these remarks are not to be used to create implied limitations in the claims and only the actual wording of the claims should be considered against these references.

Petition to Extend Time to Respond

Pursuant to 37 C.F.R. § 1.136(a), Applicant petitions the Commissioner to extend the time for responding to the January 30, 2006, Office Action for 2 months from April 30, 2006, to June 30, 2006. Applicant encloses herewith a check in the amount of \$225 made payable to the Director of the USPTO for the petition fee.

The Commissioner is authorized to charge any deficiency or credit any overpayment associated with the filing of this Response to Deposit Account 23-0035.

Respectfully submitted,



Howard H. Bayless
Registration No. 51,245
WADDEY & PATTERSON
A Professional Corporation
Customer No. 23456

ATTORNEY FOR APPLICANT



Howard H. Bayless
Wadley & Patterson, P.C.
Roundabout Plaza
1600 Division Street, Suite 500
Nashville, TN 37203
(615) 242-2400

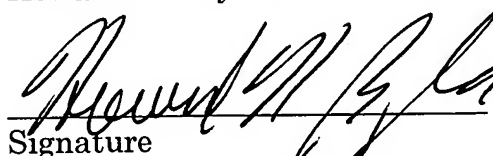
CERTIFICATE OF FIRST CLASS MAILING

I hereby certify that this Response and Amendment in Application Serial No.10/780,791 having a filing date of February 18, 2004 is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

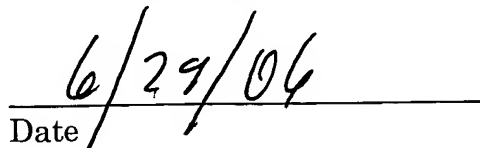
on June 29, 2006.

Howard H. Bayless



Signature

Registration Number 51,245



Date